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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/560,542 | 12/13/2005 | Katsushi Ohizumi | 64649 (70904) | 5176 |
| 21874 7590 03/23/2009 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205 | | | EXAMINER DAZENSKI, MARC A | |
| | | | ART UNIT 2621 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/560,542 | OHIZUMI ET AL. | |
| | Examiner | Art Unit | |
| | MARC DAZENSKI | 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 22 and 25-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-13-2005, 2-03-2006, 6-09-2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 28 defines a control program embodying functional descriptive material. However, the claim does not define a computer-readable medium or computer-readable memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-

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readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests amending the claim(s) to embody the program on “computer-readable medium” or equivalent; assuming the specification does NOT define the computer readable medium as a “signal”, “carrier wave”, or “transmission medium” which are deemed non-statutory (refer to “note” below). Any amendment to the claim should be commensurate with its corresponding disclosure.

Note:

A “signal” (or equivalent) embodying functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within one of the four statutory classes of § 101. Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claim 29 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 29 is drawn to functional descriptive material recorded on a computer-readable recording medium. Normally, the claim would be statutory. However, the specification, at page 107 defines the claimed computer readable medium as encompassing statutory media as well as **non-statutory** subject matter (wherein the claimed "computer readable recording medium" is defined at page 107 as being any medium that stores the control program; because a signal is included in this definition, the claim is therefore directed towards non-statutory subject matter).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 13, 19, 22, and 25-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsumagari et al (US PgPub 2003/0161615), hereinafter referred to as Tsumagari.

Regarding **claim 1**, Tsumagari discloses an enhanced navigation system using digital information medium. Further, Tsumagari discloses a DVD-Video player

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incorporating an enhanced navigation system (ENAV system), which reads on the claimed, “an information reproducing apparatus for controlling, in accordance with a manipulation input, reproduction of content data read out from a content recording medium,” as disclosed at paragraph [0022] and exhibited in figure 1; the apparatus comprising:

DVD-Video player (100) comprising ENAV engine (300) for playing back and processing ENAV contents (30) which include video information (text, still image, moving image, or animation), storyboard (still image), scenario (text), and other data (audio data and the like), the contents being controlled by event controller (310) which receives user events corresponding to user operations (menu call, title jump, playback start/stop/pause and so forth) and generates the events corresponding to the user event control signal, which reads on the claimed, “additional function information reading means for reading out, from the content recording medium, additional function information indicating an additional function correlated with the manipulation input; and additional function executing means for executing the additional function in response to the manipulation input,” as disclosed at paragraphs [0088], [0176], and [0093].

Regarding **claim 2**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 3**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 4**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 5**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 6**, Tsumagari discloses everything claimed as applied above (see claim 5). Further, Tsumagari discloses ENAV playback information comprising commands variables, including a command and variable which are used to change an audio level (a command that instructs to change an audio level and a variable that designates an audio level after change), as well as audio output controller (354) which has a function of selecting audio output of ENAV engine when audio data is out from only ENAV engine but not DVD-Video playback engine as well as switching and selecting audio output of the ENAV engine and the DVD-Video playback engine in accordance with an output method of user's choice from the user operation unit, which reads on the claimed, "the additional function information includes a flag indicating whether or not sound of the content data is muted while the audio information is reproduced," as disclosed at paragraphs [0115] and [0125]-[0126].

Regarding **claim 7**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-6). Further, Tsumagari discloses the ENAV contents are displayed in synchronism (or connection or combination) with a change in contents (change in scene) of DVD-Video contents (10) while playing back a scene of a movie or

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drama as DVD-Video contents, which reads on the claimed, "the additional function information is so set as to correspond to each scene of the content data," as disclosed at [0181].

Regarding **claim 8**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-6). Further, Tsumagari discloses DVD-Video playback engine (200) and ENAV playback engine (300) displaying a menu upon a user's request of pressing a menu button on a remote controller, which reads on the claimed, "main function control information reading means for reading out, from the content recording medium, main function control information indicating whether or not execution of a main function is approved, which main function is a function intrinsically corresponding to the manipulation input; and main function control means for controlling, in accordance with the main function control information, the execution of the main function, which execution is carried out in response to the manipulation input," as disclosed at paragraphs [0186]-[0190].

Regarding **claim 9**, Tsumagari discloses everything claimed as applied above (see claim 8). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 7 above.

Regarding **claim 10**, Tsumagari discloses everything claimed as applied above (see claim 8). Further, Tsumagari discloses when a user presses a menu button on the remote controller, a user event controller (310) in ENAV engine (300) receives this signal, and when the operation which is not expected as any user even is executed at the user operation unit, even generation-command-property processor (320) outputs an

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event control signal that "blocks a user event corresponding to user's operation at that time" so that controller (310) can inhibit "a specific event from being transmitted according to a script described in the ENAV contents," which reads on the claimed, "a function for notifying information concerning disapproval of execution of the main function is assigned, as an additional function, to the manipulation input corresponding to the main function whose execution is disapproved by the main function control information," as disclosed at paragraph [0218].

Regarding **claim 11**, Tsumagari discloses everything claimed as applied above (see claim 8). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 10 above.

Regarding **claim 13**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-5). Further, Tsumagari discloses a menu call operation that produces a DVD-Video menu or displays a still image at the moment of pausing playback which continues until the user makes the next operation (menu button operation, pause button operation, or the like), which reads on the claimed, "the manipulation input corresponds to either (i) manipulation of suspending the reproduction of the content data or (ii) manipulation of halting the reproduction of the content data, and a function for notifying information different from the content data that is being reproduced is assigned, as an additional function, to the manipulation input," as disclosed at paragraph [0207].

Regarding **claim 19**, Tsumagari discloses everything claimed as applied above (see claim 10). Further, Tsumagari discloses an interactive mode using the ENAV

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contents, the interactive mode including a mixed frame mode that displays DVD-Video playback images and ENAV contents playback image together, which reads on the claimed, "the additional function is a function for notifying the information such that the information is overlaid with the content data that is being reproduced," as disclosed at paragraphs [0165]-[0167].

Regarding **claim 22**, Tsumagari discloses everything claimed as applied above (see claim 13). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 19 above.

Regarding **claim 25**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-6). Further, Tsumagari discloses a DVD-Video disc complying with the DVD video standard having contents (10) compressed according to MPEG2 as well as ENAV data being recorded onto another recording area, the presence of which is officially recognized in the DVD-Video standard, the ENAV data containing ENAV playback information which comprises dedicated packs ENV_PCK for playback, which reads on the claimed, "the content recording medium stores data having a data structure in which the content data is sectioned based on a unit time and in which the additional function information is able to be recorded based on the unit time," as disclosed at paragraphs [0058] and [0072].

Regarding **claim 26**, the examiner maintains that the claim is merely the corresponding method to the apparatus of claim 1, and therefore the limitations of the claim are rejected in view of the explanation set forth in claim 1 above.

Regarding **claim 27**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 25 above.

Regarding **claim 28**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-6). Further, the examiner maintains that the claim is merely the corresponding program controlling the apparatus of any one of claims 1-6, and therefore the limitations of the claim are rejected in view of the explanation set forth any one of claims 1-6 above.

Regarding **claim 29**, Tsumagari discloses everything claimed as applied above (see claim 28). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 28 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsumagari et al (US PgPub 2003/0161615), hereinafter referred to as Tsumagari, in view of Evans et al (US Patent 7,469,410), hereinafter referred to as Evans.

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Regarding **claim 12**, Tsumagari discloses everything claimed as applied above (see claim 8). However, Tsumagari fails to disclose wherein a function for notifying information representing an approved manipulation input is assigned, as an additional function, to the manipulation input corresponding to the main function whose execution is disapproved by the main function control information. The examiner maintains that it was well known in the art to include the missing limitations, as taught by Evans.

In a similar field of endeavor, Evans discloses playback control methods and arrangements for a DVD player. Further, Evans discloses a “controlled unlocking” or restricted access feature to all or portions of DVD content (110) controlled by player application (102), in which the application can notify the user of the required parental level that is required to continue playing DVD content (110), which reads on the claimed, “wherein a function for notifying information representing an approved manipulation input is assigned, as an additional function, to the manipulation input corresponding to the main function whose execution is disapproved by the main function control information,” as disclosed at column 5, lines 61-65 and column 6, lines 45-51.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enhanced navigation system using digital information medium of Tsumagari to include discloses a “controlled unlocking” or restricted access feature to all or portions of DVD content (110) controlled by player application (102), in which the application can notify the user of the required parental

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level that is required to continue playing DVD content (110), as taught by Evans, for the purpose of negating a user having to guess a required level through trial and error.

Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsumagari et al (US PgPub 2003/0161615), hereinafter referred to as Tsumagari, in view of Proehl (US Patent 6,614,844), hereinafter referred to as Proehl.

Regarding **claim 14**, Tsumagari discloses everything claimed as applied above (see any one of claim 1-5). However, Tsumagari fails to disclose wherein the manipulation input corresponds to manipulation of changing either (i) a reproduction direction of the content data or (ii) reproduction speed of the content data, and a function for notifying information different from the content data that is being reproduced is assigned, as an additional function, to the manipulation input. The examiner maintains it was well known in the art to include the missing limitations, as taught by Proehl.

In a similar field of endeavor, Proehl discloses a method for watermarking a video display based on viewing mode. Further, Proehl discloses displaying different types of data during a fast-forward operation, which reads on the claimed, "wherein the manipulation input corresponds to manipulation of changing either (i) a reproduction direction of the content data or (ii) reproduction speed of the content data, and a function for notifying information different from the content data that is being reproduced is assigned, as an additional function, to the manipulation input," as disclosed at column 2, line 58 through column 3, line 15, and exhibited in figures 3A-3F.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enhanced navigation system using digital information medium of Tsumagari to include displaying different types of data during a fast-forward operation, as taught by Proehl, for the purpose of providing a usable viewer content even during a fast playback mode during which the regular video content may progress too quickly to provide any meaningful information.

Regarding **claim 15**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-5). Further the limitations of the claim are rejected in view of the explanation set forth in claim 14 above.

Regarding **claim 16**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-5). However, Tsumagari fails to disclose the manipulation input corresponds to manipulation of carrying out fast-forwarding of the content data, and a function for (i) carrying out the fast-forwarding of the content data until a predetermined position and (ii) reproducing the content data at normal speed from the predetermined position is assigned, as an additional function, to the manipulation input. The examiner maintains that it was well known in the art to include the missing limitations, as taught by Proehl.

In a similar field of endeavor, Proehl discloses a method for watermarking a video display based on viewing mode. Further, Proehl discloses watermark data can be added to selected key frames in the video stream to act as bookmarks for those selected frames so they can be easily located during fast playback, which reads on the claimed, "the manipulation input corresponds to manipulation of carrying out fast-

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forwarding of the content data, and a function for (i) carrying out the fast-forwarding of the content data until a predetermined position and (ii) reproducing the content data at normal speed from the predetermined position is assigned, as an additional function, to the manipulation input,” as disclosed at column 2, line 65 through column 3, line 1 and exhibited in figure 3A.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the enhanced navigation system using digital information medium of Tsumagari to include watermark data can be added to selected key frames in the video stream to act as bookmarks for those selected frames so they can be easily located during fast playback, as taught by Proehl, for the purpose of providing a usable viewer content even during a fast playback mode during which the regular video content may progress too quickly to provide any meaningful information.

Regarding **claim 17**, Tsumagari discloses everything claimed as applied above (see any one of claims 1-5). Further the limitations of the claim are rejected in view of the explanation set forth in claim 14 above.

Regarding **claim 18**, Tsumagari discloses everything claimed as applied above (see claim 17). Further the limitations of the claim are rejected in view of the explanation set forth in claim 17 above.

Claim Rejections - 35 USC § 103

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Akita et al (US PgPub 2003/0194212) discloses DVD player and DVD playing method.

Chung et al (US Patent 6,507,696) discloses a method and apparatus for providing additional DVD data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/MARC DAZENSKI/
Examiner, Art Unit 2621